

REMARKS

I. Status of the Claims

Upon entry of the foregoing amendment, claims 31-34, 36-40, 42-45, 47-51, 53-57, 59-63, 65 and 88-97 are pending in this application. In the Office Action, claims 31-65 and 83-97 were rejected over prior art. The independent claims have been amended to recite that the ink-jet printer is a drop-on-demand ink-jet printer and that a plurality of candies are conveyed on a conveyor for single-pass printing, as opposed to being conveyed individually and printed. Support for the amendments is found throughout the originally filed specification, for example at page 3, lines 11-15; page 18, line 32; page 19, line 2; page 20, lines 10-15; page 18, lines 24-25; and in the originally filed claims reciting "drop-on-demand." Claims 35, 41, 46, 52, 58, 64 and 66-87 have been canceled. No new matter has been added.

Applicants respectfully request reconsideration and withdrawal of the rejection in light of the foregoing amendment and these remarks.

II. Interview Summary

Applicants' representatives thank the Examiner for the courtesy extended in telephone interviews conducted on June 17, 2010 and June 24, 2010. As discussed, Applicants have amended the claims to recite that, according to the invention, a plurality of sugar shell candies or jellybeans are conveyed for single pass printing. Further, the ink-jet printer in the claims is now recited as being a drop-on-demand ink-jet printer. Applicants also discussed the image processing feature recited in claims 93-97 which permits a

consumer to preview options for decoration of custom-made edibles, which is not found in the prior art applied in the rejections.

III. Prior Art Rejection

Claims 31-65 and 83-97 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,538,767 (“Over”), which was previously applied, in view of U.S. Patent No. 5,800,601 (“Zou”), which was not previously applied.

IV. Argument

Obviousness is a legal determination based on several underlying issues of fact, namely: (1) the scope and content of the prior art; (2) the level of skill of a person of ordinary skill in the art; (3) the differences between the claimed invention and the teachings of the prior art; and (4) the extent of any objective indicia of non-obviousness.

Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

A. Claimed Invention

The elements of the invention recited in each of the independent claims are: a computer adapted to communicate with a consumer’s computer over a network (such as the Internet); a drop-on-demand ink-jet printer adapted to print high resolution ink-jet images (greater than 200 dpi with single pass printing) on the non-planar surfaces of a plurality of sugar shell candies or jellybeans; and a conveyor adapted to convey the edibles past the drop-on-demand printhead.

B. Scope and Content of the Prior Art

Commercial M&M’S® Brand Chocolate Candies are conventionally printed with a rotogravure printing system, in which an ink-laden roller contacts the sugar

shell candy. In order to obtain a system in which a consumer can select personalized images that are printed on sugar shell candies according the current claims, it was necessary to understand that the conventional printing system had to be replaced with a non-contact printing system, i.e., an ink-jet printer (to allow rapid changeover of the designs from one order to the next). It was also necessary to understand that a high-resolution drop-on-demand ink-jet printer would allow the consumer greater freedom to implement the designs; and that such drop-on-demand ink-jet printer could be combined with a conveyor and adapted to print on sugar shell candies to provide for high resolution (greater than 200 dpi) images in single pass printing. Moreover, means had to be provided to permit the consumer to interface with a network to enable selection of customized, personalized images. The combination of these elements according to the present claims was not obvious when the present application was filed.

C. Differences Between the Claimed Invention and the Prior Art

1. U.S. Patent No. 6,538,767 (“Over”)

Over is entitled “Methods and Systems for Printing on Spherical Objects,” and is principally concerned with the special difficulties related to printing on spherical or semi-spherical objects, such as golf balls (column 1, lines 9 to 13). The purported advantages described in Over relate to a system for controlling the transmission of data to a print head. Notably, the printhead is moved relative to the substrate so that printing can be resolved into a series of tracks (column 2, line 58 to column 3, line 6). While Over describes printing on non-planar surfaces, it is clear that the printing is specialized, and not performed on a single-pass basis, as set forth in the present claims. Over clearly does not describe a system in which edible items are provided for the consumer who designs them,

as presently claimed. Consequently, the system described by Over could not be adapted to allow consumers to design their own sugar shell candy or jellybeans, as currently claimed, at least because Over does not disclose a conveyor for conveying a plurality of substrates for single pass printing, but rather a conveyor for transporting objects individually to be printed in several passes. In contrast, according to the present system, a plurality of edible pieces are conveyed on a conveyor past a printhead for high resolution printing in a single pass.

Although Over makes incidental reference to edible substrates, including “eggs” (see col. 5, lines 10 and 45-48), there is no disclosure in Over relevant to consumers of edible confectionery or sugar shell candy in particular, or relevant to consumer design of any edible item.

To the extent that Over discloses image processing at all, the relevant disclosure is found at col. 6, lines 1-17. Although this passage contemplates an image data means, Over does not suggest an image processor that permits a consumer to preview options for design of printed items, as recited in current claims 93-97. For this additional reason, these dependent claims should be separately considered and found allowable.

2. U.S. Patent No. 5,800,601 (“Zou”)

The Examiner relies on Zou as teaching the claimed conveyor. The relevant portion of the Zou reference is Example 3 at col. 15, which describes a test in which M&M’S® Brand Chocolate Candies are positioned on a “conveyor belt” with adhesive tape for printing. This is clearly not a commercial system, so again there is no teaching or suggestion relevant to consumer design of sugar shell candies or jellybeans as claimed.

Moreover, Zou does not disclose printing with a drop-on-demand printer as claimed. Zou is directed to continuous-jet ink-jet printing, in which a continuous stream of ink droplets is deflected by an electric field to form an image on a substrate (see Zou, col. 1, lines 23-28). In contrast, in a drop-on-demand printhead, as currently claimed, droplets are formed at the nozzle as required to form an image. This distinction is described in the present specification at page 2, lines 12-27. A significant difference between continuous-jet and drop-on-demand is that continuous-jet printing typically does not permit high resolution printing with a single pass. As noted in the present specification at page 3, lines 20-25, a typical maximum resolution for continuous jet printing in the range of 70-90 dpi. According to the present claims, a consumer is able to design custom-made confectionery having an image resolution greater than 200 dpi.

Zou describes “direct marking” of food at col. 2, col. 40 to col. 2, line 34. As described by Zou, these techniques are used to mark food with simple information. This is a typical use of continuous-jet ink-jet printing, to provide indicia on vegetables and eggs, for example. However, continuous-jet inks and print heads are not adapted to use to make consumer-designed confectionery, with images having a resolution greater than 200 dpi. Moreover, it is not an obvious matter to switch from a continuous-jet printer to a drop-on-demand printer in this context, at least because the inks used in each case must meet different functional requirements, and the integration of the print head with the conveying system is necessarily different. Therefore providing the drop-on-demand printer, in combination with the other claim elements, is not obvious.

Zou, which is not directed to networked printing of any type, of course does not disclose an image processor that permits a consumer to preview options for the custom design of sugar shell candies or jellybeans as described in claims 93-97.

D. Level of Skill in the Art

An important aspect of the invention, emphasized in the previous arguments, and in the expert declarations discussed below, is that consumers participate in the design of sugar shell candies and jellybeans in a way that they could not prior to the invention herein. The combination of 1) a drop-on-demand printer system (which permits consumer selection of high resolution images), 2) a network (such as the Internet) which permits the consumer to interface with the manufacturing system, and 3) a conveyor for conveying the plurality of sugar shell candies or jellybeans, would not have been obvious from the references, because none of the references contemplate the consumer's involvement in the design of these edible items. Moreover, the prior art does not disclose the necessary structural elements to accomplish the task. In sum, the invention is non-obvious because of the combination of the claimed elements in the system. This combination provides the consumer with access to a product that was not previously available. As demonstrated in the evidence of commercial success, the claimed innovations created a new business model for providing custom-designed sugar shell confectionery to consumers, who, when surveyed, report that they find the system surprising and unique.

V. Secondary Considerations

Applicants have also presented evidence of commercial success sufficient to show that the invention is not obvious. The evidence demonstrates that custom-printed

MY M&M'S® Brand Milk Chocolate Candies according to the invention fared better in the marketplace than similar confections marketed through the same website which were not according to the invention. While the Examiner states that "it is not clear to the examiner if the commercial success was the result of heavy promotion or advertising, shift in advertizing, consumption by purchasers normally tied to applicant or assignee or other business events" (OA, p. 5), the Declarant Dana Michaels established the necessary nexus between commercial success and the claimed invention, in that the inventive product and the "control" were marketed on the same website. Further, the Declaration of Claudio Pugliese demonstrates that consumers consider the custom-printed products according to the invention to be highly unique—which consumer reaction would not be expected of a merely obvious combination. The Pugliese Declaration is not discussed in the Office Action at all. Applicants submit that the evidence of commercial success, which has been clearly shown to have a nexus to the claimed invention, rebuts any prima facie case of obviousness that might be deemed to have been established by the Examiner. Applicants respectfully submit that the Examiner's merely cursory remarks with respect to the declaration evidence have not properly weighed the evidence in accordance with the governing case law. Applicants respectfully request reconsideration and withdrawal of the obviousness rejection on these additional grounds.

CONCLUSION

For at least the foregoing reasons, it is respectfully requested that the rejections of record be withdrawn and the pending claims be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our address given below.

Respectfully submitted,

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